

Procedure Name:	Z1 Vestibule Ingress
Applicability:	3A and subs
Frequency:	???
Objective:	Node 1 - Z1 hatch leak check. Node 1 - Z1 vestibule pressurization, leak check, and ingress
Description:	How to connect ISA to MPEV and perform a leak check.
Crew Required:	1
Power:	None
Data:	None
Duration:	TBD
Location:	Node 1 overhead
Parts:	Vacuum Access Jumper (VAJ) - length 5 ft. Internal Sampling Adapter (ISA) Fluke 87 Multimeter ISA Pressure Module - Multimeter Adapter
Materials:	N/A
Tools:	None
Constraints:	
Assumptions:	Z1 docking complete
Reference Materials:	

Z1 VESTIBULE INGRESS

TOOLS AND EQUIPMENT REQUIRED

Unstow:

- Internal Sampling Adapter (ISA)
- Fluke 87 Multimeter
- ISA Pressure Module - Multimeter Adapter
- Vacuum Access Jumper (VAJ) - 5 ft.

MULTIMETER / ISA SETUP

- Node 1
- Overhead
1. Connect Multimeter to ISA Pressure Module
 2. Multimeter → Volts dc
 3. ISA Pressure Module → mmHgA

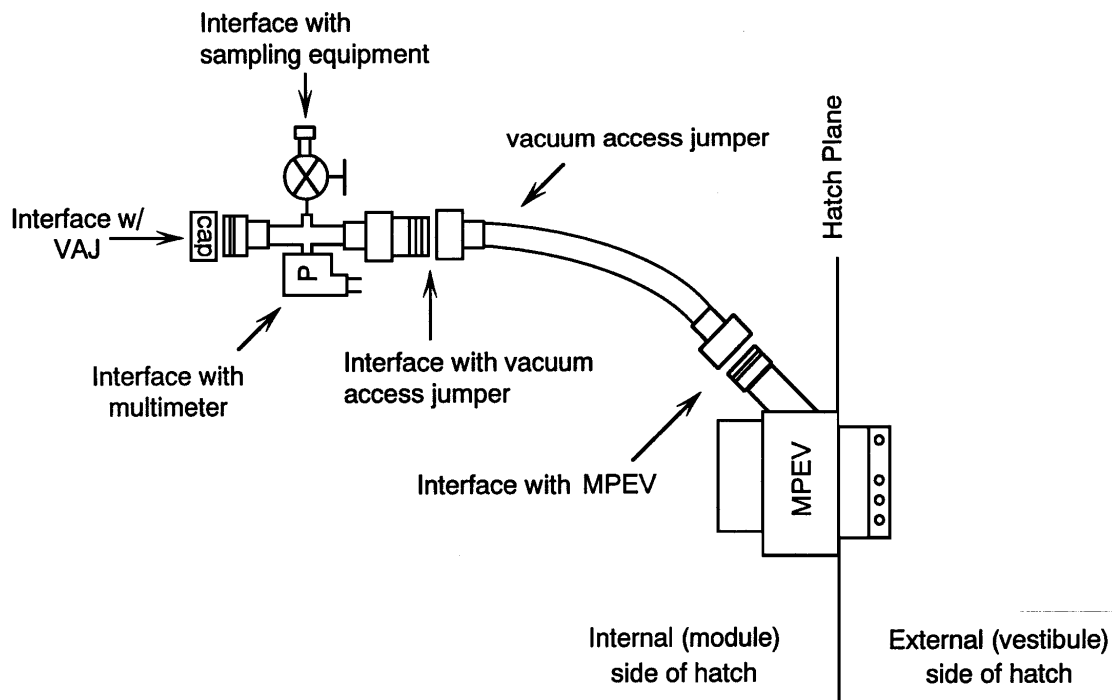
NOTE

One unit of pressure (mmHg or psi) from ISA Pressure Module is equal to 1 mV.

4. Record ambient pressure from multimeter. $P_0 = \text{_____ mmHg}$
If $P_0 < 728 \text{ mmHg}$ or $P_0 > 778 \text{ mmHg}$, contact MCC-H

NOTE

An out of range ambient pressure reading may indicate an ISA pressure sensor module calibration problem.



- Node 1
Overhead
- ISA / VAJ / MPEV SETUP
5. Uncap Manual Pressure Equalization Valve (MPEV).
 6. Stow or tether cap in TBD location.
 7. ✓One ISA VAJ port - Capped
 8. Connect VAJ to MPEV. (gamah fitting)
 9. Connect other end of VAJ to uncapped ISA VAJ port. (gamah fitting)

- HATCH LEAK CHECK
10. ✓ISA Sample Valve - CLOSE
 11. MPEV → OPEN
 12. Record Vestibule pressure. $P_{VEST} = \text{_____ mmHg}$
If $P_{VEST} > 1$ mmHg, contact **MCC-H**

NOTE

A pressure > 1 mmHg may indicate hatch leakage and therefore a hatch maintenance procedure may be required. Or, there may be an ISA pressure sensor module calibration problem.

- VESTIBULE PRESSURIZATION AND LEAK CHECK
13. ISA Sample Valve → OPEN
 14. ✓Multimeter reading
If pressure is not increasing, contact MCC-H
 15. Wait 2 minutes
 16. ISA Sample Valve → CLOSE
 17. Record pressure. $P_1 = \text{_____ mmHg}$
 18. Wait 30 minutes
 19. Record pressure. $P_2 = \text{_____ mmHg}$
 $dP = P_1 - P_2 = \text{_____ mmHg}$
Advise MCC-H of results.
If dP is < TBD, leak check passed.
If dP is > TBD, leak check failed, ✓**MCC-H** for instructions

- Node 1
Overhead
- Z1 VESTIBULE INGRESS
20. Multimeter → OFF
 21. ISA Pressure Module → OFF
 22. Disconnect and stow Multimeter
 23. MPEV → CLOSE
 24. Disconnect VAJ from MPEV
 25. Stow or tether ISA and VAJ in TBD location
 26. Open Node 1 overhead hatch per decal

Items TBD:

Duration of procedure

Possible use of 1ft VAJ

Storage locations for MPEV cap, ISA, Multimeter, and VAJ

What dP is considered a leak?
Does ISA have a "closed" decal on sample valve?